

UNITED STATES DEPARTMENT OF THE INTERIOR -
BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT -
GULF OF MEXICO REGION -

ACCIDENT INVESTIGATION REPORT

For Public Release

1. OCCURRED

DATE: 20-APR-2015 TIME: 1230 HOURS

2. OPERATOR: W & T Offshore, Inc.

REPRESENTATIVE:

TELEPHONE:

CONTRACTOR: -

REPRESENTATIVE: -

TELEPHONE: -

3. OPERATOR/CONTRACTOR REPRESENTATIVE/SUPERVISOR
ON SITE AT TIME OF INCIDENT:

4. LEASE: G13808

AREA: HI LATITUDE: -

BLOCK: A 379 LONGITUDE: -

5. PLATFORM: B

RIG NAME:

6. ACTIVITY: EXPLORATION (POE)

DEVELOPMENT/PRODUCTION -
(DOCD/POD) -

7. TYPE:

HISTORIC INJURY -

REQUIRED EVACUATION

LTA (1-3 days)

LTA (>3 days)

RW/JT (1-3 days)

RW/JT (>3 days)

Other Injury

FATALITY

POLLUTION

FIRE

EXPLOSION

LWC HISTORIC BLOWOUT

UNDERGROUND

SURFACE

DEVERTER

SURFACE EQUIPMENT FAILURE OR PROCEDURES

COLLISION HISTORIC >\$25K <=\$25K

STRUCTURAL DAMAGE

CRANE

OTHER LIFTING DEVICE

DAMAGED/DISABLED SAFETY SYS.

INCIDENT >\$25K #2 Diesel Generator

H2S/15MIN./20PPM Winding -

REQUIRED MUSTER

SHUTDOWN FROM GAS RELEASE

OTHER

6. OPERATION:

PRODUCTION

DRILLING

WORKOVER

COMPLETION

HELICOPTER

MOTOR VESSEL

PIPELINE SEGMENT NO.

OTHER

8. CAUSE:

EQUIPMENT FAILURE

HUMAN ERROR -

EXTERNAL DAMAGE

SLIP/TRIP/FALL

WEATHER RELATED

LEAK

UPSET H2O TREATING

OVERBOARD DRILLING FLUID

OTHER _____

9. WATER DEPTH: 390 FT. -

10. DISTANCE FROM SHORE: 110 MI. -

11. WIND DIRECTION: -
SPEED: M.P.H. -

12. CURRENT DIRECTION:
SPEED: M.P.H. -

13. SEA STATE: FT. -

On 20 April 2015, at approximately 1230 hours, a minor fire occurred at W&T Offshore's HI A379 'B' facility, Lease G-13808. Production Operators noticed the platform lights begin to flicker and proceeded to the #2 diesel generator which was online. Upon inspection, the crew observed smoke and barely visible flames emanating from the electrical winding end of the #2 diesel generator. The #2 diesel generator was immediately shut down which essentially stopped the flames. One (1) 30# dry chemical fire extinguisher was used to extinguish any additional flame potential. The crew continued to monitor the #2 diesel generator for an addition 30 minutes to ensure there were no secondary flare ups. No injuries or pollution events were noted.

The crew swapped the electrical load from the #1 diesel generator to the #2 diesel generator approximately 2 hours prior to the incident. W&T Offshore's policy is to alternate the electrical load between the two diesel generator's every seven days to equally distribute the duty cycle.

On 21 April 2015, the Lake Jackson District, Bureau of Safety and Environmental Enforcement (BSEE) inspectors conducted an onsite investigation. The investigation findings indicate the #2 diesel generator had been rebuilt on 9 January 2014 and transported to the HI A379 'B' facility on 8 August 2014. The #2 diesel generator was installed and placed in service on 9 August 2014. The #2 diesel generator is rated to produce 1000 Kilowatts of electricity. The BSEE inspectors requested the Lessee to send the #2 diesel generator to a 3rd party contractor for failure analysis. No Temperature Safety Elements (TSE's) in the #2 diesel generator enclosure had melted, indicating the fire was still in the incipient stage. BSEE inspectors requested the Lessee pull a TSE in the #2 diesel generator enclosure and demonstrate the Emergency Shut Down (ESD) function activated per the Safe Chart, which it did.

The 3rd party contractor disassembled the #2 diesel generator on 4 May 2015 to determine the cause of failure. The 3rd party contractor concluded the failure of the electrical winding probably started at the Stator, most likely caused by an overload or ground wall failure from moisture/contamination resulting in Arc flash. The Failure Analysis stated; "Arc Flash occurs when one or more high current arcs are created between energized electrical conductors or between an energized conductor and ground".

The Lessee's Maintenance Supervisor did not concur with the 3rd party contractor's failure analysis. The Maintenance Supervisor did not believe moisture was in the electrical winding of the unit at the time of failure. His opinion is corrosion build up in the electrical winding caused a bridge and direct electrical short resulting in the incipient fire and damage to the #2 diesel generator's electrical winding.

Both assessments concluded the #2 diesel generator electrical winding was damaged beyond economic repair. The repair cost estimate was \$50,000.

18. LIST THE PROBABLE CAUSE(S) OF ACCIDENT:

Arc Flash in the #2 diesel generator's electrical winding due to corrosion and/or contaminants are believed to have caused the failure. -

19. LIST THE CONTRIBUTING CAUSE(S) OF ACCIDENT:

*Failure of the electrical winding probably started at the Stator, most likely caused by an overload or ground wall failure from moisture/contamination.

*Arc Flash occurs when one or more high current arcs are created between energized electrical conductors or between an energized conductor and ground.

*Corrosion and rust build up in the electrical winding may have caused a bridge and

FIRE/EXPLOSION ATTACHMENT

1. SOURCE OF IGNITION: **ARC Flash in generator winding-**

2. TYPE OF FUEL:
- GAS
 - OIL
 - DIESEL
 - CONDENSATE
 - HYDRAULIC
 - OTHER **Metal**

3. FUEL SOURCE: **Generator electrical winding**

4. WERE PRECAUTIONS OR ACTIONS TAKEN TO ISOLATE
KNOWN SOURCES OF IGNITION PRIOR TO THE ACCIDENT ? **NO**

5. TYPE OF FIREFIGHTING EQUIPMENT UTILIZED:
- HANDHELD**
 - WHEELED UNIT
 - FIXED CHEMICAL
 - FIXED WATER
 - NONE
 - OTHER